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ABSTRACT

The Michigan Department of Education implemented a large-scale social action program through its Compensatory Education School Aid Act of SY 1971-72. Schools received $200 per pupil and were held accountable for pupil achievement. This paper describes the educational delivery systems in three urban schools, the evaluation of pupil achievement, and the state validation process. The results showed that the downward trend in achievement among inner-city students was reversed, and that promising educational practices were documented and replicated. The success of the programs has resulted in the continuation and recent large increase in funding for Michigan schools. (Author)

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EDUCATIONAL PROGRAM EVALUATION/VALIDATION AND PUBLIC POLICY

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During SY 1973-74, the Department of Education in Michigan validated educational practices in selected Michigan schools which were funded under the state compensatory education programs. The state compensatory education program and the compensatory education program funded under Title I, ESEA, are parallel programs, but they differ in two respects: the former is aimed at the lowest achieving students, at 15 %ile or below; the latter is aimed at low-achieving students from low income families. Another significant difference is that although both programs require evaluation of pupil achievement, the state compensatory education program requires that all pupils be included in the evaluation, and furthermore that subsequent funding be based on individual pupil performance.

Local schools and the Department of Education work together on the verifying and review process. The entire validation process consists of three parts: the purpose and scope of the process, validation procedures, and on-site visitation to the local school districts.

The purpose of educational evaluation/validation is to enable the Department of Education to identify promising educational practices and disseminate the validated results to other school districts as possible alternatives or solutions to their problems. Conversely, the evaluation/validation process also serves to pinpoint why some educational programs fail. By going through this process, it enables the school districts to delineate areas of responsibilities and identify possible underlying causes of failure.

This paper presents three validated compensatory education programs which have been successfully implemented in three urban schools in Michigan. The three elementary schools involved are located in the cities of Detroit, Lansing and Wayne-Westland.

In SY 1971-72, the state of Michigan, through its Compensatory Education School Aid Act, implemented an accountability model designed to raise school achievement of low-achieving students in basic reading and mathematics skills. This was called Section 3, and it was later changed to the Chapter 3 program.

The Michigan Chapter 3 state compensatory education program is aimed at low-achieving students only, irrespective of the student's socio-economic background. School districts were ranked according to pupils' composite achievement scores, as measured by the state educational assessment battery administered to Michigan elementary school students in SY 1970-71. Those districts with the greatest concentration of low-achieving pupils then received $200 times the computed number of students to be served. Low-achieving was defined as achieving at the 15 %ile or below; this can

be interpreted as at least one year below grade level in terms of grade equivalent units. The program served 112,000 elementary school children in 67 school districts. The total appropriation was $23,000,000 annually for a period of three years.

The schools were free to choose any form of educational delivery system which would best meet the needs of their students. All schools were required to meet the criterion of success mandated by the Department of Education --- that is, one month of growth for each month of instruction, as measured by approved achievement tests. In order for the school districts to maintain the same level of funding in subsequent years, each student must achieve at least 75 percent of the specified objectives.

For the past three years, three urban elementary schools (Hally School in the city of Detroit, Genesee Street School in the city of Lansing, and Patchin School in Wayne-Westland Community Schools) are among those which have consistently demonstrated that the downward trend of low-achieving students in urban schools could be stopped. Furthermore, they demonstrated that students could make normal progress in the elementary grades in a learning environment designed to meet their specific needs.

Table 1 contains a summary of student achievement based on percent of accomplishment, computed on the criterion of one month gain for each month of instruction in SY 1971-72 and SY 1972-73.

Approximately 60% of students in all 66 school districts achieved full funding level, that is, an accomplishment level of 75% or above in school year 1971-72. In the following year it was raised to 63%. In the Detroit public schools, approximately 51% of students met the minimum criterion of accomplishment in SY 1971-72, and in the following year it dropped to 42%. Individual students achieving partial funding increased from 6.8% to 26% in the 66 school districts, and from 13% to 32.5% in the Detroit Public School District. Students who made no gains in 1971-72 were at 13.6%; this figure was reduced to 6.5% in the following year for the 66 school districts. In the Detroit schools, the rate of zero gain or below was reduced from 12.6% to 9.6% in two years. The decreases in percent of students in the 100% and above category in all 67 school districts were due partially to the fact that all schools in SY 1972-73 switched from standardized achievement tests to locally devised objective-referenced tests in grades K-1. The percent of accomplishment as measured by CRT's cannot exceed 100%, thus suppressing the statistics falling under the 100% and above category.

Bearing in mind that Chapter 3 students were the lowest achieving students in each school building, evaluation data collected for the past three years have consistently shown that these low-achieving students, on the average, performed better than they had been performing prior to the Chapter 3 program. For example, in the Lansing school district, the district mean differences in reading

Table 1

Summary of student achievement by percent of accomplishment* in SY 1971-72 and SY 1972-73**

Accomplishment Level by Pupil Achievement	State Total Excluding Detroit		Detroit Schools		State Total	
	1971-72	1972-73	1971-72	1972-73	1971-72	1972-73
100% & Above	N 28241 % 53.1	N 19924 % 37.3	N 27289 % 46.1	N 14279 % 24.1	N 55530 % 49.4	N 34203 % 30.4
75%-99.9%	N 3624 % 6.8	N 13809 % 26.0	N 2982 % 5.0	N 10750 % 18.1	N 6606 % 5.9	N 24559 % 21.8
0.1%-74.9%	N 9542 % 17.9	N 11895 % 22.3	N 7732 % 13.0	N 19273 % 32.5	N 17274 % 15.4	N 31168 % 27.7
0% & Below	N 7221 % 13.6	N 3430 % 6.5	N 7452 % 12.6	N 5688 % 9.6	N 14673 % 13.0	N 9118 % 8.1
Total	N 48628 % 91.4	N 49058 % 92.1	N 45455 % 76.7	N 49990 % 84.3	N 94083 % 83.7	N 99048 % 88.0
Total No. of Students in Program	53233	53233	59267	59267	112500	112500

*Percent of accomplishment was based on pre- and post-test scores, computed on the criterion of one month gain for each month of instruction.

**Discrepancies between total number of students with pre- and post-test records and total number of students in the program were due to transfer, illness, migration, and missing or unreported data.

and arithmetic for grades 1-6 (SY 1971-72), as measured by the Stanford Achievement Test, were almost identical to those of the Chapter 3 students. The Lansing district means showed that students in the district started out about one month below the national mean in the first grade, and gradually the gap widened; by the time they reached the end of the sixth grade, Lansing students were about one year below the national norms. Chapter 3 students represented the lowest achieving students in the district; yet these students met the district norms in every grade level.

In the Detroit schools, the same pattern existed --- that is, students in the first grade started out about average, based on the national norms provided in the Stanford Achievement Tests and Iowa Tests of Basic Skills; by the time they reached the end of the sixth grade, students were at least one year below the national norms. The loss was gradual, but consistent: in the subject area of reading, there was a loss of 2 months by the end of the second grade, four months by the end of the third grade, seven months at the end of the fourth grade, nine months at the end of the fifth grade, and one year and two months at the end of the sixth grade; in the subject area of arithmetic, the loss in months was 2, 5, 8, 9, 10, respectively.

Although Chapter 3 students were among the lowest achieving in the Detroit schools, on the average these students showed normal progress in reading and arithmetic. Test results indicated that Chapter 3 students in the upper elementary grades were far below the national norms.

Beginning with SY 1971-72, the state compensatory education program funded under Chapter 3 of the State School Aid Act was evaluated by the Michigan Department of Education. Each student in grades K through 6 was pre- and posttested, either by locally developed criterion-referenced tests or by norm-referenced standardized achievement tests. In SY 1973-74, a selected number of schools were evaluated and validated. The delivery systems and student achievement in the basic skills in three urban schools were among those schools which participated in the validation process.

Hally school in Detroit utilized Educational Development Laboratories servicing children funded under the state compensatory education program. The major project goal at Hally school was to raise the basic cognitive skills in reading and arithmetic for low-achieving students, which constituted 23% of the total school population. An analysis of needs was achieved through diagnostic testing, teacher observation, teacher-parent conferences, and community study. Parents and school personnel formed committees in planning programs to raise pupil achievement. Reading laboratories were created for Chapter 3 students; teachers received in-service training on "precision teaching." Pretest results of reading and mathematics achievement were incorporated into prescriptive teaching.

Continuous individual student and group profiles were used by teachers throughout the school year.

There were approximately 200 Chapter 3 students distributed over eight grades (K-7). Students in kindergarten were pre-tested and posttested by the Detroit Reading Readiness Test and the mathematics subtest of the Apple Test. Students in the first grade were pre- and posttested by the Fountain Valley Reading subtest and the Stanford Early School Achievement Test (math subtest). The second graders were tested by the Stanford Achievement Test, and students in grades 3 through 7 were pre- and posttested by the Iowa Test of Basic Skills.

The pre- and posttest design was required by the Michigan State Department of Education. In addition, the Gilmore Oral Reading Test, the Gates-MacGinitie Test, and Fountain Valley Reading Skills Exercises were used as part of "precision teaching," which is directly related to the learner's needs. Students were enrolled in reading and/or arithmetic programs according to their specific needs.

The Genesee school in Lansing implemented a classroom management system similar to the Alpha II system. The Lansing school conducted a student, staff and building needs assessment prior to program implementation. There was considerable flexibility on the building level. Complete building autonomy provided program flexibility and the freedom to use the allocated funds ($200/pupil) to meet the assessed needs. The integrated staff and parent/community involvement played a key role in identifying and prioritizing objectives as well as constraints, based on needs assessment. Programs and materials were selected in an attempt to tailor the curriculum to revolve around the reading and mathematics needs of the students. A variety of commercially produced materials were used, such as the Sullivan materials, Houghton-Mifflin and SRA materials, Readers Digest, Continuous Progress Labs, etc. A motivational component involved contracting with the student, moving from short-term to long-term goals. An immediate feedback and reward system was achieved through the reinforcing event room, which stacked games, toys and candies, etc. Staff time and school facilities were utilized to address the needs of the learners. Students were pretested on instructional objectives and placed on a learning continuum that sequenced skills in reading and mathematics. Flow charts were used to track student progress on a daily basis. The Lansing staff subscribed to the philosophy that all children can learn if objectives are properly identified and needs are addressed through a management system using diversified methods and materials.

Patchin school in Wayne-Westland contracted with Behavioral Research Laboratories (B.R.L.) in implementing their Chapter 3 state compensatory program. There were eighty-three students in

the Project Read (BRL) program. Students in grades 2-6 were pre- and posttested by the Metropolitan Achievement Tests over a period of seven months. The criterion for success was a one month gain in grade equivalent units for each month in the program. The BRL Project Read introduced a "placement test," which determined the entry level into the Sullivan Programmed Reading Booklets. Under the supervision of the classroom teacher or paraprofessional, students in small groups worked 20 to 30 minutes per day on the appropriate programmed booklet. Students moved to the next level after passing periodic in-book BRL tests and final tests. They received instruction and reinforcement in the morning reading session through the use of BRL's Comprehension Readers, Service Word Booklets, related activity worksheets and instructional games. A basal reading text was used to supplement the Sullivan Reading materials.

It should be noted that a gain of .7 in GEU's represents normal progress in a seven month program; the results showed that students in the BRL project made good progress. Test results, as shown in Table 2, indicated that 72.3% of the students attained the minimum criterion for success, 21.7% of the students made some kind of progress in reading, and only 6% of the students made no gains or regressed.

Students in grades K-1 were not included in the BRL project, and were pre- and posttested by criterion-referenced tests developed locally. Thus the overall achievement for Patchin school in Wayne-Westland was somewhat higher than the 83 students enrolled in the BRL project. The test results of the three schools over a two-year period are presented in Table 3 below.

Table 2

Patchin School - Project Read (BRL) -
Reading Achievement Test Results as measured by
Metropolitan Achievement Test (SY 1973-74)

Gain in GEU	N	%
2.0 - above	13	15.66
1.0 - 1.9	30	36.14
.9 - .7	17	20.48
.6 - .4	13	15.66
.3 - .1	5	6.02
0 - below	5	6.02

Table 3

Student Achievement in Three Urban Schools
as measured by Pre- and Posttest in SY 1972-73 and SY 1973-74

Year	School District & Building	N	Average Percent Of Achievement	Rank*	75%-Above	100%-Above
1972-1973	Detroit-Hally	194	110.9%	188	36.08%	15.98%
	Lansing-Genesee	72	147.7%	71	91.6 %	62.5 %
	Wayne-Westland-Patchin	129	188.2%	28	96.12%	68.22%
1973-1974	Detroit-Hally	184	95.5%	291	50.54%	18.48%
	Lansing-Genesee	74	127.2%	112	70 %	48 %
	Wayne-Westland-Patchin	140	145.5%	62	86 %	64 %

*Total number of schools ranked = 565.

The achievement test results showed that a great many of the low-achieving students residing in the cities met the minimum criterion of success in reading and/or mathematics, and that they maintained the growth over a three-year period, beginning 1971-72. The results are significant in that these students were selected on the basis of low achieving (15 %ile or below, based on screening tests and teacher judgement). Their expected growth rate per year was below average or less than a year. The average percent of accomplishment, that is, a ratio of gain in GEU over program duration in months, showed that many Chapter 3 students made gains over 100%. The 75% and above achievement represented those individual students eligible for full funding in the subsequent year. The average percent of achievement revealed that students in the three schools, on the average, achieved much better than what was expected of them.

Hally, Genesee Street and Patchin schools were among the fifteen schools selected for validation in SY 1973-74. The Michigan Department of Education developed a handbook for validating educational practices. Validation is defined as a process of verifying the evaluation results provided by the local schools.

Participation in the validation process was voluntary. In other words, schools could elect not to participate after being selected for validation. There were four criteria for selection: 1) the project/program has been in operation for at least one year, 2) the project/program must show evidence that change has taken place, 3) the project/program must be able to provide documentation on personnel, materials and procedures, objectives and measuring instrumentation, and facilities and cost factors, 4) the cost of developing and implementing the project must not exceed 1/2 of the state average per pupil expenditure.

Once the local projects/programs were selected for validation, they were required to prepare a self-evaluation report. The self-evaluation report required the local educational agencies to document objectives of the projects/programs and accompanying evaluation procedures for these objectives, accuracy of data, the standardization of testing conditions, accuracy of data analysis, supportive evidence of conclusions drawn in terms of pupil achievement, relationship between stated objectives and findings, written documentation of process evaluation, such as timeliness, charts and minutes, and finally evidence showing that evaluation results were utilized in management decisions.

The Department of Education then selected a validation team which consisted of a specialist to look into replicability aspects, an evaluation and/or research design expert, and a specialist to assist with replicability and evaluation. The validators received a half day of training on purposes and role of delivery systems involved, procedures contained in the handbook, techniques for data validation and information gathering, and the preparation of a validation team report.

The validation team made two on-site visits to each of the projects/programs in the selected buildings. Prior to the on-site visits, the validation team members read an abstract and a proposal of the project and the self-evaluation report prepared by the local educational agencies.

The validation team acquired knowledge of the school system, critical educational needs, project goals, performance objectives, relationship of project activities to project objectives, project success and its supporting evidence, replicability and cost aspects of the program, and related information prior to their visits to the schools.

In preparation for the validation visit, the local educators have available copies of the proposal, project abstract, evaluation data and instruments, project personnel, instructional materials, and financial records.

During the on-site visit, each member has specific assignments in his/her area of expertise. They make observations of project activities and also interview pupils, teachers, administrators and others, to ascertain involvement, understandings

and reactions to project objectives.

After the second on-site visit, each member assigned to a criterion area submits his/her ratings, comments and recommendations to the team chairperson, who in turn prepares the final report.

In addition to achievement test data on individual students, the local schools also provided process evaluation data, which were directly related to the stated program objectives, and financial data on the project.

The achievement results showed that a great majority of the low-achieving Chapter 3 students residing in the cities met the minimum criterion of success in the two basic cognitive areas of reading and mathematics, and that they maintained the growth over a three-year period. The average gain scores in reading and mathematics were approximately seven to eight months in grade equivalent units.

The educational and scientific significance of this study lies in its demonstrated success, as evidenced by the yearly evaluation of pupil performance in the elementary grades. The process and product performance objectives of selected projects/programs were validated and documented so that these promising practices could be replicated in other school buildings in the state.

The delivery systems and results of the findings were reviewed by the local school districts for program modification and adaptation. The results were also reviewed by the State Board of Education and the Michigan legislature in their educational policy decision-making. After three years of experimentation of the accountability model, the appropriation ($23 million) of the state legislature for state compensatory education programs was continued and maintained at the same level in the midst of a depressed economy. This could be attributed to the fact that the Chapter 3 state compensatory education programs for the past three years have been successful in bringing up students' achievement in cognitive skills. The sustaining effect of these gains can be further validated through the test results of the original first graders when they reach sixth grade in SY 1976-77.

Another index of the degree of success of the compensatory education program can be assessed by observing the dropout rate of the school district. For example, in the Detroit schools, the enrollment in the twelfth grade is less than 40% of the enrollment in the first grade twelve years earlier. The Detroit School District predicted that if the current trend continues, it will soon reach the point where only one-third of those entering the first grade will be graduated from high school twelve years later. It is these kinds of statistics which make

longitudinal studies essential in evaluating the effects of compensatory education programs.

The Chapter 3 compensatory education program in Michigan becomes even more significant in view of the fact that recently the Office of Education released a Request for Proposal to fund a large-scale, six-year evaluation study of the sustaining effects of compensatory education programs funded under Title I, ESEA. It is anticipated that at the end of six years the study will provide Congress with the necessary information which will enable the legislators to make a data-based decision about Title I, ESEA programs.

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